

A Study on the Humanitarian Aid Driven Cyclone Aila (2009) Recovery in Koyra Upazila of Bangladesh

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Synopsis

The post-disaster recovery with the new dimension of building back better is still a new concept in disaster management practice in Bangladesh. This research attempted to examine the cyclone Aila recovery process in Koyra upazila of Bangladesh. Since the cyclone hit in 2009, a large number of NGOs and humanitarian organizations have been promoting recovery in the affected area. The research adopted a composite methodology of field based disaster management research. The method included institutional survey, expert interview and Focus Group Discussion with local people with an aim of understanding overall recovery process and evaluating the outcome of the NGOs activities. The result shows that NGOs activities are mostly focused on short-term measures to promote early recovery. Moreover, the research identifies weaknesses in existing NGO coordination mechanism at the local level which impede achieving aid effectiveness in recovery.

Keywords: Cyclone Aila, Humanitarian Aid, Recovery, vulnerability reduction

1 Introduction

The role of humanitarian organizations in disaster response is growing in Asia with lots of success stories and criticism (Osa 2013). With this trend, NGOs have grown to become an important sector for development in Bangladesh (M. R. Islam 2016). Their contribution in disaster management especially in improving community resilience are published at international level (Ahmed et al. 2016). Recognizing the role of NGOs in post-disaster recovery, the government of Bangladesh has considered the GO-NGO partnership in national disaster management framework (Khan and Rahman 2007). At the time of humanitarian crisis in post-cyclone Aila period, NGOs has played an important role in emergency response and recovery (Walton-Ellery 2009; Tada 2011). However, aid effectiveness, accountability, coordination of NGOs in disaster response are being criticized with field evidence (Mahmud and Prowse 2012; R. Islam and Walkerden 2015; B. Mallick et al. 2017). This research was designed to examine the humanitarian aid driven cyclone Aila recovery in Bangladesh.

Cyclone Aila struck west coast of Bangladesh on May 25 of 2009 with the intensity of 'Severe Cyclonic Storm' (Max intensity 65 Knots, minimum MSLD 974 mb) as per IMD classification (JTWC 2009). Since there is no observed data of surge height, different studies estimated the surge height varying between 2m – 6m (ECHO 2009; IFNet 2009; Roy et al. 2009) on the basis of people's perception, watermarks, and local evidence. The cyclone killed 190 people and washed way 350 thousand acres of cropland, 243,191 numbers of houses, 237 km of embankments and 2,233 km of roads completely (UNDP 2010). Around 3.9 million people in 11 coastal district were the direct sufferer of the cyclone Aila in southwestern coastal districts (UNDP 2010). The economic impacts and people suffering outweighed the impact of any severe cyclone struck in recent time (B. Mallick and Vogt 2014). Along with the government's emergency relief program, humanitarian agencies responded quickly and disbursed around 44.25 million USD for emergency responses in terms of food assistance, health support, water supply, sanitation, education, nutrition, livelihood, and shelter support (UNDP 2010). Thereafter, UNDP led a multi-sector early

recovery program under a newly established coordination mechanism (UNDP 2011). Nevertheless, people suffering, ongoing vulnerability, and repeated tidal floods are still visible. This situation motivated to conduct this research to examine the humanitarian aid driven recovery after the cyclone Aila in Bangladesh.

2 Study Area

This research considered Koyra, one of the most severely affected upazila (sub-district) in Khulna district of Bangladesh as a case study area. Koyra is located at the boundary of the world largest mangrove forest, Sundarbans (Fig. 1).

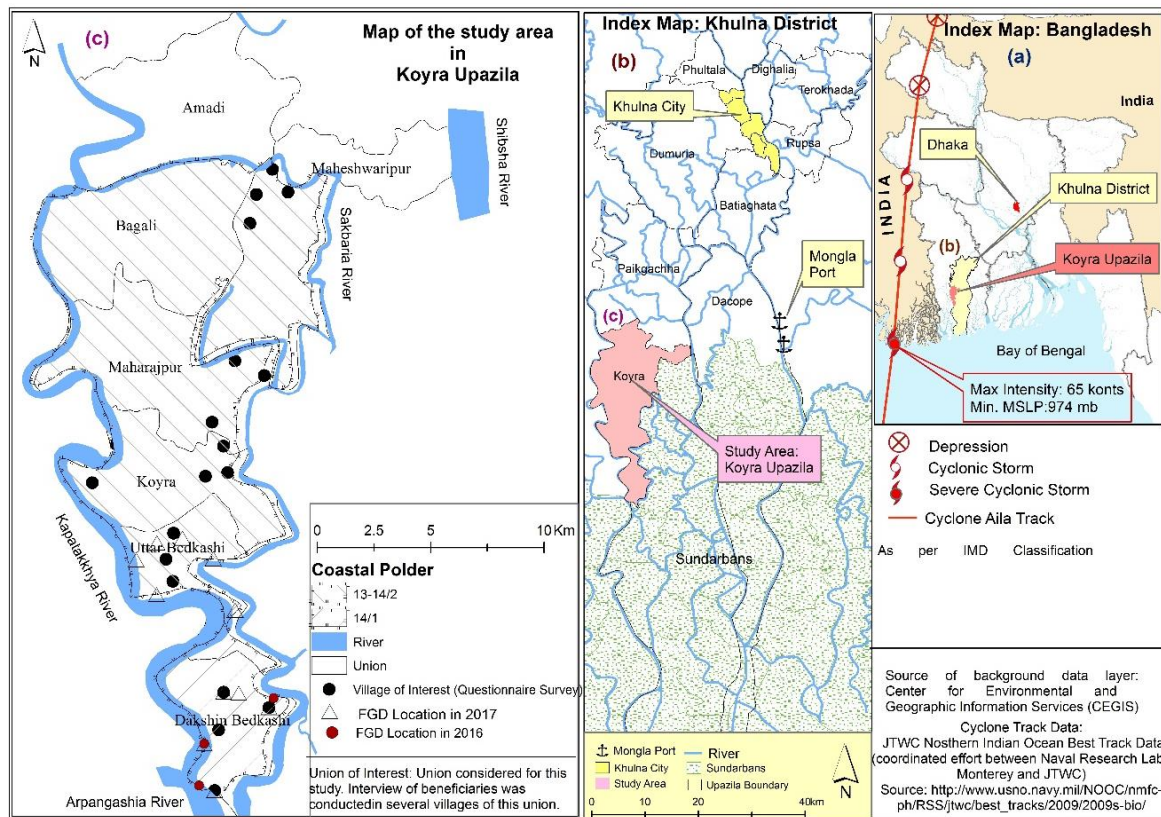


Fig. 1 Map of the Study Area

Similar to all the coastal areas in Bangladesh, Koyra upazila was also protected from salinity intrusion and tidal flooding by coastal embankments (coastal Polder no 13-14/2 and 14/1). At the time of landfall of cyclone Aila, 3m – 4m storm surge overtopped and breached the earthen embankment of Koyra and resulted in the inundation of almost entire upazila (Roy et al. 2009) (Fig. 2). Around 81 km of 119 km embankment in Koyra was completely damaged which caused damage to 42,440 houses, 11,500 ha croplands, 10,364 shrimp farms, 163.5km of paved road, 680km earthen road, 49 bridges and culverts, and 9 academic institutes in Koyra (source: Koyra upazila office). Aila left the embankment open at 36 places which allowed continuous tidal flooding in entire upazila and permanent inundation in a vast area in Koyra (Fig 2) (Roy et al. 2009). That tidal flooding and inundation continued even after 2-3 years of Aila.

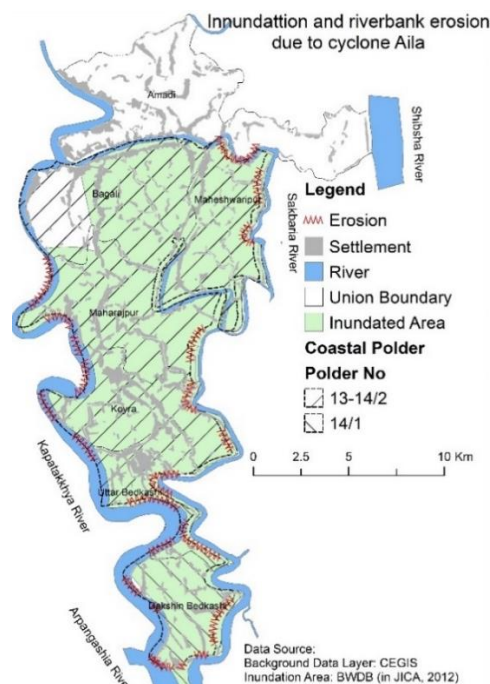


Fig. 2 Map Showing Inundation and Erosion due to Storm Surge of Cyclone Aila

3 Methodology and Field Research

This research adopted a composite methodology of field-based social research and literature based theoretical analysis. Field survey included a number of Focus Group Discussion (FGD) at 13 villages, questionnaire survey at 18 villages in Koyra upazila which helped to develop

the story line of the Aila recovery. Moreover, institutional survey (Fig. 3) was conducted to identify which institutes involved in Aila recovery in Koyra and what were their activities. Besides, Key Informants Interview (KII) and Expert Interviews were conducted which ultimately guided to understand the overall mechanism of the humanitarian aid driven recovery.

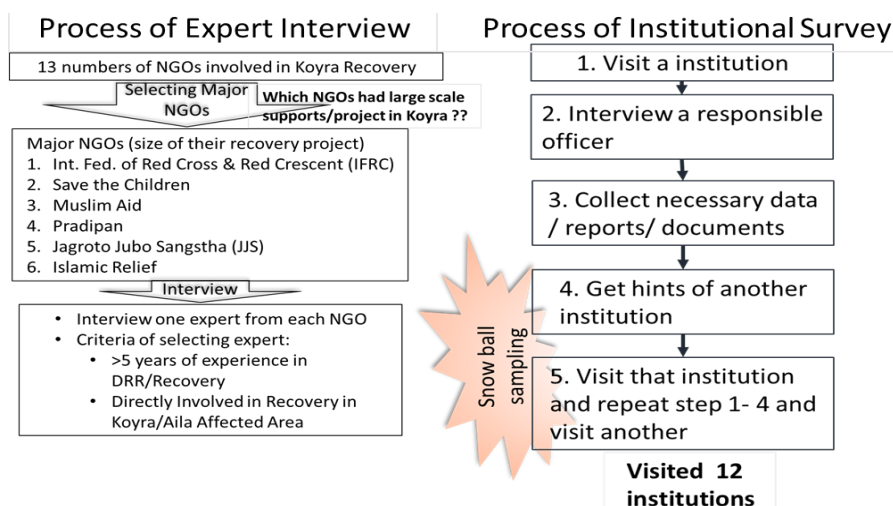


Fig. 3 Process of Expert Interview and Institutional Survey

4 Humanitarian Aid driven Recovery in Koyra

This research started with attempting to identify recovery measures and to develop a storyline of the

recovery in Koyra. To this end, a matrix of recovery activities (Table 1) was developed by accumulating the data from institutional survey and literature review to comprehensively display the overall story of the cyclone Aila recovery in Koyra.

Table 1 Matrix of Recovery Activities

Recovery Initiatives	Organizations													
	Emergency Relief & Response	Water and Sanitation	Health	Housing	Shelter	Safety	Education	Poverty/Livelihood	Awareness	Infrastructures				
Emergency Relief Support (F & NFI)	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Emergency WS & Sanitation	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Emergency Shelter package	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Small Scale Mitigation Cash for Work	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Medical Camp	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Repair of damaged water Supply & Sanitation (WSS) system	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Construction of New WSS system	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Hygiene Promotion	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Nutrition	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Hygienic Kits Distribution	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Health Education	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Housing Material	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Cash Grant for House repair	•	•	•	•	•	•	•	•	•	•	•	•	•	•
New House Construction	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Cattle Shelter/Killah	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Repair of Cyclone Shelter	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Construction of New Cyclone Shelter	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Emergency Repair of Embankment	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Closing embankment breach by ring embankment	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Rehabilitation of Embankment	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Early Warning: Risk Communication	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Temporary Learning Session	•	•	•	•	•	•	•	•	•	•	•	•	•	•
School Repair	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Provide essential Furniture	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Construction of new schools	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Education and recreational materials	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Micro-credit	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Cash/ Boat/ Net/ Rickshaw Distribution	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Food Support	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Technical Support for Livelihood	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Cash for Training	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Cash for Work	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Distribution of Agricultural input / Juvenile Fish	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Cash for Alternative Livelihood	•	•	•	•	•	•	•	•	•	•	•	•	•	•
DRR and CCA Awareness	•	•	•	•	•	•	•	•	•	•	•	•	•	•
School Based Resilience Awareness for Children	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Emergency Repair earthen Roads	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Rehabilitation and Construction	•	•	•	•	•	•	•	•	•	•	•	•	•	•

Note: Source Institutional Survey, Project Documents of relevant humanitarian assistance projects of NGOs.

4.1 Emergency Response and Relief

Immediately after the cyclone Aila, humanitarian organizations came up with humanitarian supports. Different multilateral and bilateral agencies e.g. European Civil Protection and Humanitarian Aid Operations (ECHO), European Union, Department for International Development (DFID) of United Kingdom, Swiss Agency for Development Cooperation (SDC), Government of Spain, World Food Program, UNICEF, FAO, UNDP, WHO provided humanitarian assistance to save lives of the affected people (UNDP 2010). In most of the cases, development partners delivered the assistance through their partner NGOs. Gratuitous rice, cash grants, and food assistance, education aid, nutrition program, livelihood supports, shelter supports, and emergency water supply and sanitation were the means of assistance provided by the humanitarian organizations and development partners as emergency relief. The emergency relief was continued even up to June 2014 in some villages where it was not possible for the people to return to their houses due to tidal flooding. Besides, humanitarian organizations along with their partner NGOs and local NGOs also took initiatives for emergency repair of roads, embankments, educational institutions, community ponds, pond sand filters, etc. and helped selected households in reconstructing or new constructing their houses and sanitation facilities. ‘Cash for Work’ was a major scheme implemented by the local government and NGOs for emergency repairing of the roads. Since

the full fledged reconstruction of roads and embankments delayed, these short-term measures were very helpful to the local community for daily communication. Besides, the ‘cash for work’ scheme itself was a temporal opportunity of income earning for the affected people which helped them to survive. However, these short-term measures did not resume their livelihood activities (agriculture and shrimp farming) since tidal flood regularly inundated the area through openings of the embankments. Thus, recovery of coastal embankment became very urgent.

4.2 Early Recovery

The government of Bangladesh did not call for any emergency humanitarian aid rather they requested for support in recovery and reconstruction of infrastructure and livelihoods (UNDP 2010; B. Mallick et al. 2011). In response to the request, UNDP led a joint program of a multilateral fund to promote early recovery under the umbrella of Early Recovery Facilities (ERF) of Local Consultative Group (LCG) (UNDP 2011; UNDP et al. 2013). Under the ERF, initiatives were taken to help the government in the recovery of coastal embankments and roads, to provide new houses with sanitation facilities to affected families who could not recover and to improve disaster preparedness (UNDP et al. 2013) (Photo 1). From emergency response to early recovery, humanitarian agencies and development partners engaged their partner NGOs for delivering the support to the beneficiaries.



(a) Repair of embankment



(b) House with sanitation facilities provided by UNDP



(c) Waters tanks of a home based Rain Water harvesting System

Photo 1 Pictures showing implemented recovery measure

Water supply and sanitation, health, housing, shelter, safety, education, livelihood, awareness, and infrastructure were major sectors of early recovery projects or programs of ERF. The overall early recovery storyline had been developed from the institutional survey and FGD has been briefly discussed in the following sub- sections.

4.2.1 Water Supply and Sanitation

Sanitation was one of the critical sectors which was affected severely by the cyclone Aila. It seems from the table 1 that this was a most preferred sector for NGOs to involve. As an early recovery measure NGOs repaired the damaged water supply and sanitation system first. Thereafter, the new water supply e.g. the Rainwater Harvesting System (RHS) or hand pump tube wells and sanitary latrine were constructed at households of the neediest families.

Besides, community ponds were improved by re-excavating, raising the height of the bund and installing Pond Sand Filters (PSF). Apart from the conventional technologies, few advance and innovating technologies were also introduced. For inference, in Maheswaripur union of Koyra, a desalinization plant had been installed and handed over to local union council for maintenance. Local people can buy 5 liters of fresh drinking water with only 6 US cents (0.06 USD). Besides, NGOs launched hygiene promotion related activities. These efforts indeed improved their water supply and sanitation situation. However, adoption of appropriate technology and disaster risk reduction are still unsolved issues. Hand pump tube-wells are effective only in few villages where the shallow aquifer is salinity free. Since Koyra is located in the coastal area where salinity is very high, the pond sand filter and rainwater harvesting system are very useful in most of the villages. However, maintenance of RHS and PSF is also an issue since it is financially difficult for local people or the community. Moreover, pond and PSF are not effective in long run. Saline water shrimp farming is practiced very extensively there which causing rising of salinity in a pond surrounded by saline water shrimp farms. Although the earthen bunds of the ponds have been re-constructed, embankment failure or breach at the time of storm surge will lead inundation of these ponds by saline water again.

4.2.2 Health

Apart from the emergency health services, health sector recovery was a rarely interested sector for NGOs. NGOs' activities were limited to nutrition program, health education and hygienic kits distribution. However, improvement of health facilities like the capacity development of existing hospitals by improving medical facilities, treatment facilities, or construction of new hospitals etc. were not found in NGOs' provided supports. Therefore, health facilities as a whole have not been improved so much than the pre-Aila condition.

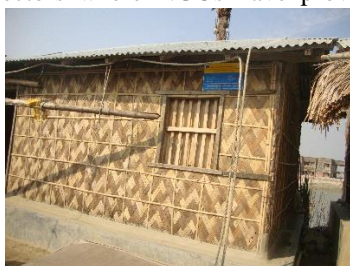
4.2.3 Housing

Housing is considered as one of the major sectors where NGOs have provided an extensive

support. Firstly, NGOs provided housing materials like corrugated iron sheet, bamboo sheets, etc. to some families. Thereafter, they came up with another package of support called transitional shelter (Photo 2 a & b). By definition, a transitional shelter is a house (of 2 years lifespan) newly constructed for a family on his own land where the beneficiary family can reside until a long-term durable solution can be provided (Bangladesh Shelter Cluster 2015). Since there was no recommended design, different NGOs constructed transitional houses differently. Although, by definition transitional cluster indicates the beneficiaries are eligible for long term durable housing solution, they did not get the durable house provided by UNDP later. Around 20% - 30% affected families had received these transitional houses (source: FGD in 2017).

Finally, the ERF of UNDP constructed brick house along with sanitation facilities which they called the 'core family shelter (CFS)' under a component named 'resilient village' for only 265 Aila affected people (De Silva and Shafie 2014). The ERF prioritized affected families who did not receive transitional shelter. Similar to transitional houses, there was no recommended design but a general guideline which allowed different NGOs constructing the core family shelter differently in different upazilas.

A research has been found endorsing the UNDP's claim of these core family shelters in Dacope and Shamnagar upazilas as a resilient village approach (F. Mallick and Islam 2014). However, the design of CFS in those two areas are different where the houses are standing on concrete stilts. Whereas, CFSs in Koyra are not stilt houses (Photo 2). Since these houses have been built in a place already exposed to tidal flood and storm surge without considering any risk-based land use planning, and any DRR measures for storm surge, their claim of resilient habitat cannot be established. During the FGD, all participants were expressing their fear that if a similar cyclone with storm surge hit again, these villages along with these houses will be inundated.



(a) Transitional House



(b) Transitional House



(c) Core Family Shelter

Photo 2 Pictures showing housing supports provided by NGOs

4.2.4 Cyclone Shelter

Similar to health sector NGOs did not much involve in the recovery of cyclone shelter. Generally, cyclone shelters were rehabilitated and newly constructed by the government with the help of development partners. However, few NGOs activities were found in maintaining cattle shelters at the period when the area was inundated. Before Aila, there were only 5 cyclone shelters in Koyra upazila whereas at present 12 new shelter have been constructed and six more are under construction. Among them, only five shelters have livestock shelter. Nevertheless, still, the people of 3 wards will have to share one cyclone shelter (source: FGDs in 2017).

4.2.5 Safety from Cyclone and Storm Surge

In this research, activities related to embankment recovery, early warning mechanism, evacuation, and any other structural and non-structural measures which would contribute increasing safety to cyclone and storm surge has been considered in 'safety' cluster as mentioned in Recovery matrix (Table 1).

While the government department, Bangladesh Water Development Board (BWDB) was facing a hard time to initiate emergency recovery of embankments, NGOs helped the community to build a temporary earthen dike (locally called the ring dike) around the embankment opening (due to breaching by Aila). NGOs also constructed earthen roads and raised the bund around the shrimp farming ponds which resulted in compartmentalization of tidal floods and helped local people to resume their livelihood activities. However, these measures are short-term and do not ensure protection from storm surge.

BWDB approached to different development partners for financing in the recovery of embankments. Under the ERF umbrella, the Embassy of the Kingdom of Netherlands implemented a recovery initiative in Koyra where they rehabilitated around 2.92 km of embankment out of 81 km damaged sections (EKN and UNDP 2015). The rest of the embankments were rehabilitated with financial supports from the World Bank and the Annual Development Program of the Government (JICA and OCCL 2012). However, this rehabilitation was limited to restoration to pre-Aila design condition and did not consider any improvement and additional DRR measures. The full-fledged recovery which includes such improvement is still in a study phase (CEIP-I 2012).

Despite continuous criticism, the early warning system which was designed for protecting two seaports of the country has not been revised yet (Akhand 2003). However, NGOs initiated several program targeting dissemination of warning and awareness building. International Federation of Red Cross and Red Crescent Society and Bangladesh Red Crescent Society's initiatives on improving risk, Risk communication, developing community volunteer organizations, capacity development of such organizations really helped to improve the mechanism of effective evacuation and rescue.

4.2.6 Education

The cyclone Aila caused complete damage to 9 and partial damage to 70 educational institutes which resulted in collapsing the road communication system completely. Consequently, the regular education system was suspended for a long time. At that time, NGOs initiated temporary learning sessions at evacuation centers and along the embankments where the displaced population took temporary shelter (for more than a year). NGOs also helped to repair partially damaged institutes and provided educational material. Since most of the houses were either washed away or collapsed (42,440), children's books were also washed away. NGOs provided books and other educational materials. Moreover, NGOs continued school-based nutrition program, sanitation promotion program, and disaster awareness programs.



Photo 3 A rainwater harvesting system installed at a school

4.2.7 Livelihood Support

Supporting the livelihood of the affected people is another major cluster of recovery activities of NGOs. Almost all the NGOs who were working in Koyra had activities related to livelihoods. Followed by the emergency relief, NGOs ran a program of ‘cash for work’ which was mostly a scheme for emergency repair of rural infrastructure by employing affected people. Though this program was for a short period (60 days), it helped the affected people by giving an opportunity of income to survive. NGOs and local government (union council) jointly made a list of eligible families depending on their economic condition, needs and damage caused by Aila. One person from each listed family could get the opportunity to work in ‘cash for work’ scheme.

Since this scheme was for a short period, at the time of monsoon where this work was not possible people were at risk of poverty. Thereafter, at the period of no ‘cash for work’, NGOs ran another scheme of ‘cash for training’. Under this scheme, NGOs provided training on disaster awareness, livelihood, and sanitation and paid some honorarium to the participants.

Apart from these short-term supports, NGOs also provided cash grant for alternative livelihoods, net, and boats for fishers, rickshaw puller, etc. to affected families to resume their livelihood activities. NGOs also provided seeds, juvenile fish, and other agricultural inputs to promote agricultural and shrimp farming activities.

During the FGD, local people were expressing high gratitude towards NGOs. NGOs helped them to survive during their hard time when embankments were open and the entire area was inundated by the tidal flood. Afterward, when the embankment was repaired and rehabilitated, NGOs helped them to resume their income earning activities. Although, local people have resumed their income earning activities, their fear of uncertainty of income has not over. Since their economic activities very much depend on agriculture, their income vulnerability to storm surge due to the prevailing poor condition of the embankment is high.

4.2.8 Disaster Awareness for Preparedness

NGOs launched several training programs on improving disaster preparedness, disaster risk reduction, and climate change adaptation. These training programs motivate the community to evacuate with preparedness at the time of cyclone warning. During FGD, local people were mentioning these training programs as helpful to

become prepared and not be panicked at the time of any disaster event.

4.2.9 Infrastructures

NGOs involved only in emergency repair and recovery of rural earthen roads. Under the ‘cash for work’ scheme NGOs employed Aila affected people in repairing of rural roads. NGOs also helped the local community in converting the earthen bund of the shrimp aquaculture pond to the walkway. These supports helped the community in resuming their road communication. However, these were only short-term measures. Thereafter, Local Government Engineering Department reconstructed rural roads under the World Bank funded ‘Emergency Cyclone Recovery and Restoration Project (ECRRP)’ and the government funded ‘Rehabilitation of AILA Affected Rural Infrastructure Project (RAARIP)’. Few roads were also reconstructed under the ‘Annual Development Plan’ of the government. These reconstructions did not consider any additional DRR measures or any improvement of design. Neither, any new road has been constructed which would increase road network than the pre-Aila period. Therefore, vulnerabilities related to infrastructures are similar to pre-Aila vulnerabilities.

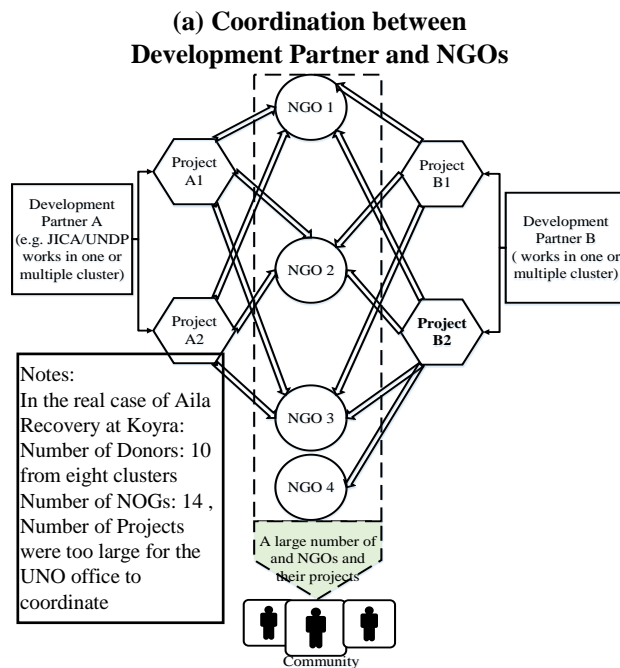
From the above discussion with reference to the Table 1 it can be summarized that except livelihood support and disaster preparedness, NGOs activities are mostly limited to providing short-term measures. Although these short-term measures helped the community towards a recovery, the principle of recovery as per the Sendai Framework cannot be achieved. Since long term DRR measures are not adopted, the underlying vulnerabilities to cyclone and storm surge remain similar to the pre-Aila situation. Local people expressed the fear of similar severe damage from a future similar cyclone and storm surge during FGDs which support these evidence of underlying vulnerabilities.

5 Coordination of Humanitarian Organization and NGOs in Aila Recovery at Local Level

As a signatory of the ‘Paris Declaration on Aid Effectiveness’ Bangladesh established the Local Consultative Group (LCG) as a national level coordination structure for foreign aids. Within this mechanism, the Humanitarian Coordination Task Team (HCTT) maintains coordination among 8 humanitarian clusters i.e. Food security, WASH, Education, Early Recovery, Nutrition, Health, Logistics, and Shelter, and coordination with the government. The HCTT ensures national level coordination by arranging meetings, issuing

common guidelines and making platform for dialogues among the development partners from different clusters. However, this mechanism does not ensure coordination at the local level. Since all development partners (of 8 humanitarian clusters) engage iNGOs and local NGOs to deliver their response and recovery support to the disaster affected community, local level coordination at the disaster-affected area is necessary.

Under the existing mechanism as illustrated in (Fig. 4 a) a development partner contract a local



NGOs for delivering a support to affected community. Same NGO can be employed by other development partners as well. Since a development partner may have different support program with different project entity, the contracted NGO would have a similar number of projects to deliver. As mentioned earlier, development partners from eight humanitarian clusters contracted a number of NGOs to deliver the support to the affected community which eventually results a sudden surge of NGOs activities in a disaster affected community.

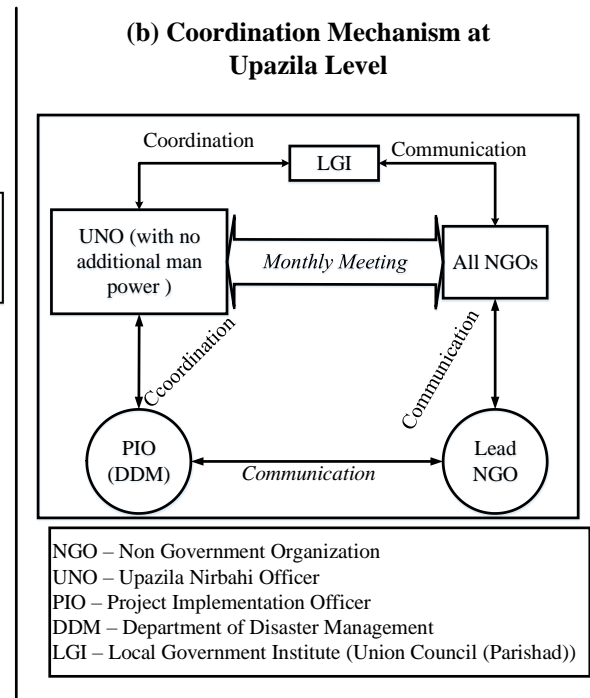


Fig. 4 The existing mechanism of NGO coordination at upazila level

In Koyra, 13 NGOs were involved in emergency response and recovery activities with large numbers of projects. Within the present mechanism (Fig.4), the office of the Upzila Nirbahi (Executive) Officer (UNO) of the local government is responsible for maintaining the coordination among the NGOs working in his upazila. Since the Koyra upazila office was also affected by the cyclone and the office had its own relief programs to run, it became a hardship for the UNO to maintain that coordination.

NGOs have to work closely with the Department of Disaster Management (DDM), Local Government Institutions (e.g. Union Councils, Upazila Councils, etc. formed by elected public representatives of local government) and the UNO. Thus, the NGO coordination structure at local level (upazila level) seems very complex to understand (Fig. 4, b). The UNO assigns an NGO as a lead NGO with the responsibility of maintaining coordination

with other NGOs and reporting to the UNO office. However, the lead NGO can only maintain a communication among the NGOs. With the aim of maintaining coordination, UNO arranges monthly coordination meeting with NGOs where NGOs are supposed to share their work progress, experience from the field, and their applied innovative ideas. Unfortunately, this coordination meeting is not becoming effective. These NGOs are contracted by the funding agencies i.e. development partners through a competitive process of an open call. Since they are a competitor to each other, they hardly share their innovative ideas, strength, weakness, and approach of dealing local complexities (e.g. politics, corruption, the influence of local elites, etc.) with each other. Thus the principal motivation of coordination meeting which is sharing work experience to achieve a common goal fails. Eventually, the aid effectiveness remains unachievable. Therefore, establishing a new

coordination mechanism at upazila level becomes a timely action to take.

From the field experience and discussion with different NGOs it appears that establishing the Humanitarian Coordination Task Team (HCTT) at the local level with representatives from different donors and capacity building of local government especially the upazila office of the department of disaster management are the key to ensuring NGO coordination at the local level.

6 Concluding Remarks

Bangladesh has a long experience with cyclone disaster. Its achievement of reducing life loss from disaster is globally appreciated (Alam and Collins

2010; Haque et al. 2012). This achievement is the result of growing preparedness and disaster awareness. There are remarkable shifts in disaster management policies and practices (Table 2) which contributed to this achievement. These shifts include the use of multimedia in risk communications, development of community volunteers to guide in evacuations, national level coordination structure for humanitarian aid driven disaster response and recovery, capacity building of local government in disaster preparedness, and focus on housing. In general, the disaster management approach is more oriented towards the pre-disaster preparedness and the post-disaster recovery. However, the true implication of the build back better concept in the recovery and mainstreaming of disaster risk reduction in recovery process are still missing.

Table 2 Shifts in disaster management policies and practices in Bangladesh

Major Dimension	Focus before Cyclone Sidr (2007) and Aila (2009)	Major transition and Shifts in Post Cyclone Sidr and Aila era
Early Warning, dissemination and evacuation	Sea-Port based early warning system	No change
	Radio and community miking	Use of Multimedia (mass media to community miking), Mobile phone based services (SMS, Interactive Voice Response)
	Self-evacuation to cyclone shelters	Volunteer-guided evacuation
Disaster Response	Emergency Relief (Cash, food, clothes, medical, etc.)	Relief (Food and Nonfood items), Cash for work
	Un-coordinated relief and response operation	National level coordination structure, Joint Need Assessment (NGO + Government)
	Emergency repair of infrastructure	Emergency Repair and Early recovery of livelihoods. Rehabilitation of critical infrastructures
	Cluster village/shelter home for homeless	House reconstruction support
Disaster Preparedness	Plan and act in the post-disaster period	Pre-disaster logistic planning and storage for response operation
Overall Disaster Management Approach	Emergency relief operation	Pre-disaster preparedness and post-disaster recovery
Realization of Missing Links	Coordination, Logistic Planning, Preparedness	Pre-disaster Recovery Planning, Humanitarian Coordination at the local level. True Application of Resilience Concept in Recovery

The lack of adopting long-term viable DRR measures in recovery measures can be strongly seen in humanitarian aid driven NGO activities for Aila recovery. Emergency response, water supply and sanitation, livelihood support, housing and awareness building were the sectors where humanitarian organizations and NGOs involved to promote recovery. Whereas, NGOs rarely involved in the recovery of health, infrastructure, and safety structure from storm surge. Construction of House,

water supply, and sanitation system are the most visible activities of NGOs which they have been claimed as a significant contribution to the recovery. However, houses have been constructed in places which were exposed to storm surge. Other than the Core Family Shelter (brick house) which was provided only to a limited number of families (265 families), most of the constructed houses were built just to support their transitional phase from emergency to recovery. Since the affected communities could not build a better house, they are

still living in those houses. Therefore, their vulnerabilities related to housing condition are almost similar to the pre-Aila condition. The stories are more or less similar in water supply, livelihoods, and rural infrastructure recovery where lack of adopting DRR measures indicate underlying vulnerabilities similar to pre-Aila conditions.

Coordination of humanitarian aids as well as NGOs activities is another missing link that impedes the aid harmonization. At the post-Aila period, numbers of humanitarian aid supported recovery projects suddenly rose to a very high number along with the number of implementing NGOs. It became a hardship for the UNO office to ensure coordination whereas the office campus was inundated and it had its own emergency relief programs to coordinate. Similar to other developing countries, the Local Consultative Group was established to ensure national level coordination of humanitarian aids following the Paris Declaration (2005). Although the role of LCG structure in ensuring coordination is always criticized (Rahaman and Khan 2010), this research suggests that the Humanitarian Coordination Task Team of LCG should extend their structure to the local level and should work in an integrated way with local government to ensure humanitarian aid coordination at the local level. Otherwise, the criticisms of NGOs for the lacking accountability, coordination, and harmonization with local needs (Mahmud and Prowse 2012; R. Islam and Walkerden 2015) cannot be overcome.

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